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EXAMINER

COMPTON, ERIC B

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 9

Application Number: 09/966,487
Filing Date: September 28, 2001
Appellant(s): ALDRIDGE, C. KENT

Ralph A. Graham
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 23, 2003.

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(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

Appellant raises two issues for appeal. See Brief, page 5.

Issue 1: Whether claims 8-12, 15-19, 38-43, and 47 are unpatentable under 35 U.S.C. § 103(a) as being obvious over U.S. Pat. 5,242,299 to McLarty.

Issue 2: Whether claims 8-21 and 38-47 are unpatentable under 35 U.S.C. § 103(a) as being obvious over either U.S. Pat. 5,242,299 to McLarty, or U.S. Pat. 5,695,290 to Mondak et al., in view of U.S. Pat. 4,336,971 to Reiter.

Upon review of Appellant's brief, Appellant's arguments with respect to McLarty were found persuasive. Therefore, the rejections based on McLarty have been withdrawn.

Thus, only remaining issue for appeal is:

Whether claims 8-21 and 38-47 are unpatentable under 35 U.S.C. § 103(a) as being obvious over U.S. Pat. 5,695,290 to Mondak et al., in view of U.S. Pat. 4,336,971 to Reiter.

(7) Grouping of Claims

Appellant's brief includes a statement that, "Independent claims 8 and 15 stand or fall together. Independent claims 38, 39, 40, and 41 stand or fall separately. Claims 9-14 and 16-21 stand or fall with independent claims 8 and 15. Claims 42-47 stand or fall with claim 41." Brief, page 5.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

4,336,971	REITER	6-1982
5,695,290	MONDAK ET AL	12-1997

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 8-21 and 38-47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. 5,695,290 to Mondak et al. (hereinafter "Mondak") in view of U.S. 4,336,971 to Reiter.

Mondak (see Figure 5, esp) discloses a method of forming a bearing having a two piece bearing seal. One piece of the bearing seal is engaged with the inner race and the other piece of the bearing seal is engaged with the outer race. The two pieces of the seals cooperate to prevent dirt from interfering with the rolling members. In these references the fingers of the bearing seal pieces engage with corresponding grooves in both the inner and outer races.

However, the reference does not disclose crimping the first and second pieces of the bearing seal to the inner and outer races of the bearing, respectively.

Reiter discloses a method for assembling a bearing seal. "Initially, the end of the axial wall 62 on each case 60 is straight so that it easily fits over the turned down end surface 34 on the cup 24 or 26, but once the seal case 60 is pressed onto the cup 24 or 26, its axial wall 62 is deformed inwardly into annular groove 32 adjoining the turned down surface 34 to secure the seal case 60 firmly on the cup 24 or 26." (Col. 6, lines 35-41).

Regarding claims, 8, 15, and 41, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to have crimped the first and second pieces of the bearing seal to the inner and outer races, respectively of the bearing of Mondak, in light of the teachings of Reiter, in order to secure the seal onto the bearing race so that it cannot be withdrawn (see Col. 7, lines 41-43).

Regarding claims 9-10, 18-19, and 42-43, Reiter discloses that the seal is engaged into an annular groove in the bearing race.

Regarding claims 11, 16, and 47, in Mondak, the second seal member includes an elastomeric seal located on a support member.

Regarding claims 12 and 17, in Mondak, an elastomeric seal is imposed between the inner and outer races, which rotate with respect to each other. It has been held that the recitation that an element is "configured to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Regarding claims 13, 14, 20-21, and 44-45, Reiter discloses a collet tool (F, see Figure 4) for crimping the seal. Elastic member (76) is provided, which when collet undergoes elastic deformation, the seal member (60) is crimped into the annular interface (32). The deformation of the elastic ring (76) inherently forms fingers that engage the seal. The number of fingers is dependent of the number of bosses (82) provided. It is inherent that a separate collet would be needed for each crimping operation due to the differences in diameter between the inner and outer races.

Regarding claim 38-40, the product is inherently disclosed by the method of forming it.

Regarding claim 46, Reiter provides a flinger (68).

(11) Response to Argument

As noted above, the only issue for appeal is whether the rejections of claim 8-21 and 38-47, as being unpatentable over Mondak, in view of Reiter, should be sustained. The rejections based on McLarty have been withdrawn. Therefore, Appellant's arguments with respect to McLarty are now believed to be moot and will not be

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addressed. Appellant's arguments regarding the obviousness rejection of Mondak, in view of Reiter, begin on page 13 of the Brief.

Mondak discloses a bearing assembly having first and second seal members attached to inner and outer bearing rings, respectively. "Locking fingers 60 [of the second seal member] extend from the annular portion into the annular groove 46 [of the outer bearing ring]." Col. 2, lines 53-54. Similarly, "Locking fingers 64 [of the first seal member] extend into the corresponding annular groove 50 [of the inner bearing ring]." Col. 2, lines 65-66. Mondak further discusses "the seal may be made of spring tempered material with spring locking fingers" that "snap into the grooves in the rings at assembly to provide mechanical retention of the seal, resisting dislodging of the seal during handling and installation or during relube." Col. 3, lines 26-30. This attachment means is consistent with Appellant's discussion of prior art snap-fit engagements. See Specification, page 2.

However, Mondak does not disclose crimping the first and second seal elements to the inner and outer bearing rings, as claimed by Appellant.

The Examiner further relied on Reiter to teach crimping a seal element to a bearing ring. Reiter discloses deforming the seal member to attach it to the bearing ring.

Initially, the end of the axial wall 62 on each case 60 is straight so that it easily fits over the turned down end surface 34 on the cup 24 or 26, but once the seal case 60 is pressed onto the cup 24 or 26, its axial wall 62 is deformed inwardly into the annular groove 32 adjoining the turned down surface 34 to secure the seal case 60 firmly on the cup 24 or 26.

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Col. 6, lines 35-41. This is same crimping technique relied on by Appellant. See Specification, page 7-8; Figures 7-8. Appellant even concedes this point as well, "As noted above, Reiter only discloses pressing an axial wall 62 of the seal case 60 into the annular groove 32 of the cup 24 or 26 represents (sic) 'crimping a second seal member to the second interface surface of the *outer* ring.'" Brief, page 16. In further discussing crimping the seal member to the bearing race, Reiter provides for deforming the seal member by "... securing the axial wall 62 so *that the seal case 60 cannot be withdrawn from the cup 24 or 26 which it is attached.*" Col. 7, lines 41-43. (emphasis added). Reiter, therefore, seeks to form a permanent attachment of the seal member to the bearing race.

Appellant contends "the Examiner has not establish a *prima facie* case for obviousness because there is no teachings or suggestion supporting the proposed combination." Brief, page 15.

MPEP § 2142 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

With regards to the first criterion, in setting forth the above obviousness rejection based on Mondak in view of Reiter, the Examiner stated,

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Regarding claims 8, 15, and 41, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to have crimped the first and second pieces of the bearing seal to the inner and outer races of the bearings, respectively of ... Mondak et al, in light of the teachings of Reiter, in order to secure the seal onto the bearing race so that it cannot be withdrawn (see col. 7, lines 41-43 [of Reiter]).

Final Rejection, page 4; Non-Final Office Action, page 7. The Examiner has proffered a suggestion and/or motivation to combine the reference teachings based on the prior art. Furthermore in formulating the motivation to combine the references, the Examiner in no way relied on the teachings of Appellant's own disclosure. Thus, the first criterion is satisfied.

With regards to the second criterion, the Examiner previously pointed out to Appellant the Reiter taught a crimping technique "to secure the seal onto the bearing race so that it cannot be withdrawn." *Id.* (*paraphrasing* Reiter, Col. 7, lines 41-43). Furthermore, nothing in Mondak necessarily precludes other attachment means for the seal member. In both Mondak and Reiter, a portion of the seal member engages with a corresponding groove in the bearing race. "The metal parts of the seal *may be* made of spring tempered material with formed spring locking finger." Col. 3, lines 26-27 (emphasis added). Appellant has not put forth any evidence that the method of Reiter is unreliable or unsuccessful. In determining the expectation of success, the Examiner in no way relied on the teachings of Appellant's own disclosure. Therefore, the second criterion is satisfied.

With regards to the third criterion, the Examiner previously established that the references, as combined, teach all the claim limitations. See Final Rejection, pages 3-4. Mondak taught forming an interface between the first and second seal members and

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inner and outer bearing ring, respectively. When assembled, the seal members cooperate with one another to seal the bearings. Reiter taught crimping the seal member to the bearing ring to permanently secure the seal member to the ring to prevent its withdrawal. Therefore, the third criterion is satisfied.

Having satisfied all three criteria, the Examiner maintains a *prima facie* case of obviousness has been properly established.

Appellant also argues "However, the Reiter reference does not disclose or suggest 'crimping a first seal member to the first interface surface of the inner ring' in addition to 'crimping a second seal member to the second interface surface of the outer ring.'" Brief, page 14. In response to this argument against the reference individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Mondak discloses a seal assembly having first and second seal members attached to inner and outer bearing races, respectively. Thus, forming a seal assembly having first and second seal members by crimping the seal members to the inner and outer races, as taught by Reiter, inherently suggests the step of "crimping a first seal member to the first interface surface of the inner ring," would be inherently suggested.

Lastly, Appellant's arguments with respect the rejections of claim 12 and 17, based upon the claim limitations "configured to" is duly noted by the Examiner. Brief, pages 10-12. Nonetheless, this limitation is addressed and clearly suggested by the prior art, especially Mondak. See Final Rejection, page 4. Mondak provides an

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elastomeric seal between the rotation members. "[I]f desired the seal lip 70 might extend in a different direction," so long as it makes a wiping contact. Col. 3, lines 14-15.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

E.C.

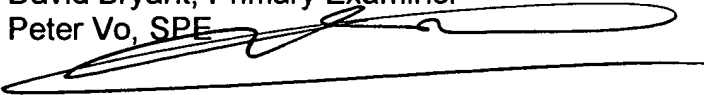
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February 19, 2004

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